

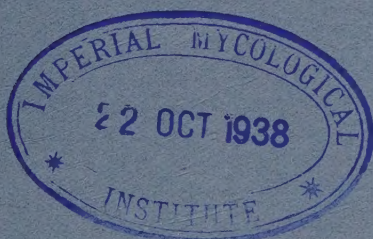
VOLUME XIII

No. 6

GOVERNMENT OF NORTHERN IRELAND
MINISTRY OF AGRICULTURE

MONTHLY REPORT

OCTOBER, 1938



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GOVERNMENT OF NORTHERN IRELAND
MINISTRY OF AGRICULTURE

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MINISTRY OF AGRICULTURE

MONTHLY REPORT

OCTOBER, 1938.

The rapid approach of the winter appropriately enough since the putting back of the clock to mark the end of Summer Time, has perhaps been less noticeable in the country than in the town. This is because of a late agricultural season; some grain and hay crops remain in the fields and grass is still somewhat luxuriant and a verdant green, and in certain other respects the land does not show those signs that are usually associated with the approach of the dormant season. As far as weather conditions go, however, there have been but few and fleeting glimpses of summer since mid-September, and the prospects of securing the remainder of the crops in reasonably good condition are fast disappearing as the rains continue.

Fortunately, as indicated in earlier reports, this year's harvest has been a good one, and the bulk of the fodder crops has been safely gathered in to the stackyard. Potato growers, however, have not yet lifted the main crop. While the cold temperatures at the end of the growing season were beneficial in keeping in check the spread of blight, the disease made some headway in districts where farmers delayed spraying. This fact is now causing some uneasiness. Procrastination, therefore, may prove to be more than the thief of time in this connection; it may well happen to rob the country of a considerable quantity of good marketable produce this year.

AGRICULTURAL CONDITIONS.

AGRICULTURAL CONDITIONS AT 1st OCTOBER, 1938.

Weather conditions last month were generally rather like those of the preceding month; the first half of September was fine and warm in contrast to the remainder, which was wet and cold.

The exceptionally good weather experienced up to the 16th of the month was most welcome, and harvesting operations, which had been interrupted by the rains of late August were re-commenced. Farmers made full use of the many opportunities to secure grain crops under favourable conditions, and in the early districts this work was completed before the weather broke. In the late districts much remains to be done, for, with the wet weather predominating in the latter half of September, progress with harvesting work was seriously impeded and a considerable proportion of the grain crops is still in the fields, and the same can be said of meadow hay. The digging of the main crop of potatoes was also somewhat delayed, and a start on a general scale was only possible during a few favourable intervals at the close of the month. Threshing operations also were interrupted by bad weather, and only a small amount of this work has as yet been done. It is feared that late harvested grain and hay will have suffered in quality from weathering, and the yields may not be as high as anticipated earlier on account of losses sustained from the recent rain storms. The potato crop also will have suffered damage in the low-lying districts from excessive dampness.

Pastures are in remarkably good condition for the time of the year, and good quality "keep" is still plentiful, especially on well drained land that has been kept well grazed, the tendency elsewhere being for the grasses to shoot or become rank. The aftermath also is reported to be good. The heavy rains of the past fortnight, the absence of sunshine, and the colder night temperatures, have combined to slow up growth, and in all probability brought about a depreciation in the feeding value of the grasses. In some areas meadow lands were rendered unfit for grazing by the excessive rains. On the whole, however, keep has remained plentiful, and with good yields of oats anticipated in most areas to offset the lighter hay crops ample supplies of home grown fodder will be available for the coming winter. Roots and green crops are in good condition, and satisfactory supplies of these foods should also be available for cattle feeding.

Towards the end of the month the use of purchased food stuffs became more extensive as the weather conditions deteriorated. Prices for the principal cakes and meals continued a steady downward trend up to the middle of September, but on account of some anxiety developing with the international political situation prices reacted sharply in the direction of former high levels: this despite the fact that all concerned had received an assurance that supplies of feeding stuffs were sufficient for normal requirements, and that as in the case of the principal foods for human consumption there was no reason for prices to be advanced.

The general condition of livestock continued satisfactory, and cattle and sheep being fattened on grass made a good thrive last month, but in a number of districts this season's lambs are still rather backward in condition. The health of the animals is generally good, and seasonal outbreaks of disease such as "felon" in dairy cattle and "hoose" and "red-water" among grazing animals, appear to be confined to normal dimensions. Some sheep have been affected by lameness, but otherwise the flocks are trouble free, attacks of liver fluke especially being comparatively rare.

The live-stock trade situation during September varied but slightly, and prices were little altered on the month.

THE CROPS.

WHEAT.—All winter wheat was secured in good condition, but a fair proportion of spring wheat is still in stooks. In the late districts it was difficult to get crops cut and fields cleared during the wet weather at the end of September. Where the crop was harvested well up to time, and under good conditions, the yields will be fully up to average dimensions, and the quality of the grain good. In the case of late crops, however, the quality of the grain may have suffered from the weather at harvesting time, and may be rather lower in yield than anticipated earlier.

OATS.—This crop was late in ripening, and there appears to have been a considerable amount of unevenness at the ripening stage; some oats were still in a green state towards the end of September. In early districts oats were saved under good conditions in the earlier part of September, but elsewhere progress varied considerably with the effects of the weather. In most districts, however, the bulk of the crop is in stooks or huts, and only in a relatively few instances, where the crop was still in a green state, had cutting to be completed. Partial lodging was fairly prevalent, following the unsettled weather in the second half of August, and the work of cutting and saving was, thereby, rendered slow and difficult. In some cases where the crop was lodged at an early date there has been a fair amount of rotting. As indicated, harvesting and carting operations were delayed this year by two

or three weeks behind the normal times for this work, and threshing has only now commenced in a few districts. The results so far show that the yields of grain and of straw have exceeded average dimensions. Should, therefore, the remainder of the crop be gathered in under reasonably good conditions the prospect of high yields of good quality grain and of straw should be realised in most areas.

Last month the new season's crop made its first appearance at the markets, and supplies increased rapidly during the month. An average price of 5/7d. per cwt. was recorded for the month, as against 7/- per cwt. for September, 1937. Quotations for the new crop generally ranged from 5/- to 7/- per cwt. Small quantities of last year's oats continued to be offered at a few centres and prices hardened, and on average rose by 3d. on the month to 8/0 $\frac{3}{4}$ d. per cwt.

BARLEY.—Much of this crop also was difficult to handle owing to severe "lodging". Most of it has been stacked, the remaining small portion being still in stooks. The average yield of grain is expected to exceed last year's figure, and to be in the neighbourhood of 1 ton per acre. The straw is reported to be heavier in bulk than usual, and the quality of both the grain and straw should give general satisfaction.

FLAX.—The general lateness of the harvesting season was very notable in the case of this crop, the handling of which was much behind the normal time of the year. In some instances the green flax is still in "gates", whilst in a number of districts stacking is being completed as the weather permits. Scutching has not commenced on any appreciable scale. Reports of the condition of the crop indicate that, while the green flax is of greater bulk than last year, the average yield of fibre may be slightly below normal.

POTATOES.—Except in a few early districts where the lifting of the main crop was done in the first half of the month to meet requirements, this work is rather backward, and a general commencement elsewhere was only made towards the end of September. This work has been rendered more difficult this year by the heavy growth of weeds, a legacy of the wet weather experienced earlier in the season. Unless drier weather arrives soon the ground may become unworkable, and heavy damage may be done to the tubers. Although blight disease was late in making its appearance, it made considerable headway in unsprayed fields, despite the fact that the low temperatures of late August helped to check its spread to some extent. In some areas where it was late in appearing, and spraying was delayed, fears are now being felt for the amount of damage done. In most cases, however, effective spraying measures were taken in good time, and it is thought that the crop will generally suffer no abnormal loss and be almost up to average dimensions in yield. In some early districts heavy yields of good quality tubers

have been obtained, but since so much depends on the weather for the lifting of the remainder of the main crop any estimate of total production must be regarded as speculative. The shipping demand throughout September remained very poor, and only small quantities were disposed of by growers at disappointing prices.

SHIPMENTS OF POTATOES FROM NORTHERN IRELAND.

		1938			1937
		tons			tons
Week ending September 3rd	..	91	Week ending September 4th	..	139
" " " 10th	..	155	" " " 11th	..	153
" " " 17th	..	158	" " " 18th	..	234
" " " 24th	..	171	" " " 25th	..	606
" " October 1st	..	748	" " October 2nd	..	744

With the demand for ware potatoes continuing dull the quantity offered at markets for local consumption was rather smaller than for the same month a year ago, and the average quotation of 2/11d. per cwt. for all classes of the main crop was 1d. cheaper than that of September, 1937, and August, 1938. The principal variety, Arran Victory, was 1½d. cheaper on the month at 2/11½d. per cwt., while Kerr's Pink at 3/4½d. was 3½d. cheaper. Decreasing supplies of British Queen were lower in price by 2½d. at 2/11½d. per cwt. The last of the early varieties were disposed of at an average price of 3/0½d. per cwt.

MANGELS.—Satisfactory accounts continued to be received of the state of this crop, and only in a comparatively small number of cases where the crop is in a poor way and almost overgrown by weeds, will the yields be under normal dimensions. Weeds are plentiful in all areas, little cultivation work being possible during the wet season. A fairly high proportion of the bulbs have bolted in some districts, and the variety "Long Red" appears to have been the most susceptible in this respect.

TURNIPS.—Weather conditions continued to favour the growth of turnips during September, and the prospects of good yields of roots are very bright at the moment. The best looking crops are those where thinning was completed early, as elsewhere the subsequent wet weather prevented the work of cultivation, with the result that weeds are a prominent feature of many fields. As in the case of mangels, bolting has been fairly common in some areas, whilst losses from damage by crown rot disease have also been reported.

HAY.—Harvesting work has been almost completed, only a relatively small amount of meadow hay still remaining in the fields in ricks and in cocks. Although meadow hay is generally quite a good crop this year in the late districts the produce will, doubtless, show marked deterioration from the effects of the recent heavy rainstorms. The threshing of hay for seed was

done on a fair scale during last month, and the results have been rather disappointing. The yields generally have been lighter than for the 1937 season, and the quality of the seed is barely moderate.

Supplies of perennial ryegrass seed offered at markets during September increased rapidly, and although price movements were irregular, the average quotation advanced on the month by 3/10d. to 18/1d. per cwt. Mixed seed also was in good supply, and prices fluctuated slightly around 12/- per cwt. In the latter half of the month fair supplies of Italian seed were offered, and the average price for these was 16/10d. per cwt. Last month's rates were generally well above those obtained at the opening markets in September, 1937, viz., 9/8d. per cwt. for perennial, 7/4½d. per cwt. for mixed, and 5/- per cwt. for a small lot of Italian seed.

Decreased supplies of last year's upland hay were more than offset by the larger quantities of new season's crop. Prices were steady throughout the month, with a slight upward tendency, at average quotations of 67/- per ton for last year's upland hay, and 53/6d. for this year's crop. First supplies of this year's meadow hay at Belfast averaged 44/- per ton, as against an average of 50/- per ton at the opening markets last year.

LIVE STOCK.

CATTLE.—Grazing cattle made a fairly good thrive during September with "keep" remaining plentiful and hand feeding being done on an increased scale towards the end of the month when the weather and ground conditions deteriorated. In some districts owners were retaining finished animals in the hope of prices improving in the near future. The estimates of the number of store animals, and of cattle being fattened on grass, vary according to district but, generally speaking, there does not appear to be much change from previous years. Outbreaks of disease have been of rare occurrence, but "hoose" and "redwater" have given a little trouble in a few districts.

Trade for store and fat cattle continued on quiet lines during the earlier part of the month, and price tendencies were easier, but later there was an improvement in the demand, and quotations showed some recovery.

Dairy cattle have been maintained in a reasonably good healthy condition, but "felon" is fairly common in a number of districts, and has given trouble to some owners. Calving proceeded normally. The milk yield declined during the month, especially at the close, but all over the decrease was not abnormal for the time of the year.

The demand for the rather short supplies of dairy stock was well maintained at firm rates.

SHEEP.—The flocks have been maintained in a healthy condition, and seasonal outbreaks of disease such as foot rot and fluke have been notably less troublesome than in recent years. Ewes have improved in condition, but this season's lambs are stated to be still somewhat backward in some areas.

Increasing supplies were offered at fairs and sales during last month, but trade remained on the dull side although some slight improvement was generally experienced towards the end of September.

Breeding ewes of quality were the best trade, and good types of Border-Leicester rams also attracted considerable attention. In the other sections only fat animals of quality and finish were sought, whilst store sheep were a very quiet trade. Prices all over remained disappointing to sellers, being well below last year's high levels.

PIGS.—Good supplies of young pigs were available at most centres, and a firm demand ruled at improved rates. Sows for breeding remained a small trade at unchanged rates.

Weekly returns of (1) shipments of live pigs to Great Britain, and (2) purchases of dead and live pigs for curing in Northern Ireland last month are compared hereunder, with corresponding details for 1937 in brackets.

Week ended	Shipments to Great Britain		Bought dead and alive for curing in Northern Ireland.				Total	
			Dead		Alive			
3/9/1938	1,921	(1,676)	8,492	(9,392)	3,450	(3,282)	13,863	(14,350)
10/9/1938	2,019	(1,809)	9,231	(10,640)	3,756	(3,776)	15,996	(16,225)
17/9/1938	2,010	(1,622)	9,661	(11,260)	3,748	(3,417)	15,419	(16,299)
24/9/1938	2,042	(1,677)	10,867	(10,738)	4,177	(3,156)	17,086	(15,571)
1/10/1938	1,245	(1,370)	9,970	(9,517)	5,069	(2,283)	16,284	(13,170)
39 weeks ended 1/10/1938	66,739	(104,020)	342,629	(334,135)	126,412	(97,733)	535,740	(533,222)

HORSES.—There was little activity in the horse trade during the month. While good strong horses for farm work maintained late rates, ranging up to £50 per head, price changes generally indicated an easier tendency. Price ranges were—First class sound horses (4 to 5 years old), £30 to £45 per head; second class horses and younger animals, £25 to £30 per head.

MILK.—Although good supplies of grass were available, the rather sudden change to wet and cold conditions in the latter half of September was trying on the dairy herds, and brought about a decline in the milk yield. This was reflected to some extent in the recent improvement in the demand for springing

and other classes of dairy cattle. Supplies of milk were, however, up to normal dimensions for the season. Creameries paid from $4\frac{1}{2}$ d. to $5\frac{1}{4}$ d. per gallon for milk delivered to the creamery, the separated milk being returned to the farmer. The rate of equalisation payments for milk produced in Northern Ireland, and delivered to creameries for manufacturing purposes, has been determined at 0.20d. per gallon for the month of August, 1938, in accordance with the Milk and Milk Products Acts (Northern Ireland), 1934 to 1938.

It should be noted that under the regulations creameries are required to distribute the equalisation payments in accordance with the butter-fat content of the milk received from each supplier.

THE COST OF LIVING INDEX FIGURE.

The cost of maintaining unchanged the pre-War standard of living of working-class families at September 1st was approximately 56 per cent. above the level of July, 1914, the corresponding figures for August 2nd, 1938, and September 1st, 1937, being 56 and 55 per cent. respectively.

At September 1st the index of retail prices of food in Great Britain and Northern Ireland, as ascertained by the Ministry of Labour, was 40 per cent. above that of July, 1914, and compares with 41 per cent. at August 2nd, and 40 per cent. a year ago. Decreases in the prices of potatoes, bread and flour, were mainly responsible for the fall in the current index, although the effect of these was partly offset by increases in the prices of eggs.

THE MARKETS DURING SEPTEMBER.

With the exception of cabbage, there were considerable increases in supplies of the principal home-grown vegetables marketed last month, and price movements in the main indicated a slightly easier tendency. Cabbage was a little less plentiful and dearer, the average quotation rising by 3d. to $1/5\frac{1}{2}$ d. per dozen. New season's supplies of savoys marketed in Belfast and Portadown fetched from $1/2$ d. to $2/4$ d. per dozen. Cauliflower were reduced in price by $5\frac{1}{4}$ d. to $1/10\frac{3}{4}$ d. per dozen, leeks by 1d. to 5d. per bunch, and parsnips by $3\frac{3}{4}$ d. to 5/- per cwt. Parsley, carrots and garden turnips were unchanged in price on the month; parsley averaged 6d. per bunch, carrots $9/4$ d. per cwt., and garden turnips $1/3$ d. per cwt.

In the provision section, farmers' butter was marketed in larger quantities than in August. Print butter was stationary in price at $1/2\frac{1}{2}$ d. per lb., while lump butter was $\frac{1}{4}$ d. dearer at $1/2\frac{1}{4}$ d. per lb. Supplies of eggs were somewhat larger than a month earlier. Prices as fixed by the Ministry of Agriculture from week to week remained firm throughout the greater part of the month, but towards the close the fixed price of hen eggs inclined to weaken, as shown in the table on page 307.

In the poultry section supplies of hens, chickens and ducks were larger than in August. Chickens were 2d. dearer at $2/0\frac{1}{4}$ d. each; ducks $\frac{1}{4}$ d. dearer at $2/4\frac{1}{4}$ d. each, while hens made late rates at $1/6\frac{3}{4}$ d. each. The prices per lb. live weight paid by wholesale merchants firmed slightly on the month and ranged from 6d. to $7\frac{3}{4}$ d. for chickens; 4d. to 6d. for hens, and 4d. to $6\frac{1}{2}$ d. for ducks.

Smaller supplies of wool were marketed at firmer rates. Long (unwashed) wool was $\frac{1}{2}$ d. dearer at $6\frac{1}{2}$ d. per lb., and mountain (unwashed) wool $\frac{1}{4}$ d. dearer at $5\frac{1}{4}$ d. per lb.

MARKETING OF EGGS ACTS (N.I.) 1924—1937.

The following table shows the prices fixed by the Ministry, and payable by licensed wholesale dealers, for eggs purchased from producers during the following weeks, as compared with the average prices at markets for the corresponding weeks of 1937.

Week ended	1938				1937			
	Hen eggs per lb.*		Duck eggs per dozen*		Hen eggs per lb.		Duck eggs per dozen	
	s.	d.	s.	d.	s.	d.	s.	d.
September 3rd	1	$0\frac{1}{4}$	1	2	0	11	1	$1\frac{1}{4}$
" 10th	1	$0\frac{1}{2}$	1	3	0	$11\frac{1}{4}$	1	2
" 17th	1	$0\frac{1}{2}$	1	3	0	$11\frac{1}{2}$	1	$1\frac{1}{2}$
" 24th	1	0	1	3	1	$0\frac{1}{4}$	1	$2\frac{1}{2}$
October 1st	0	$11\frac{3}{4}$	1	3	1	$0\frac{1}{2}$	1	3

*Where hen eggs are delivered by the producer to the packing store of a licensed wholesale dealer of Class A an additional $\frac{1}{2}$ d. per lb. is payable; in the case of duck eggs an additional $\frac{3}{4}$ d. is payable for each complete dozen so delivered.

Payment on a quality basis came into operation during the week ended 5th March, 1938. The following were the standard deductions :—

Hen Eggs : "Seconds" and soiled eggs $\frac{1}{2}$ d. per egg, Rejects $1\frac{1}{2}$ d. per egg.

Duck Eggs : Rejects 1d. per egg during week ended 3rd September, afterwards $1\frac{1}{4}$ d. per egg.

MARKETING OF EGGS ACT (N.I.) 1936

The term of office of the present Egg Marketing Committee for Northern Ireland, which was appointed for two years, expired on Friday, 30th September, 1938. In accordance with the provisions of the Marketing of Eggs Act (Northern Ireland), 1936, the Minister of Agriculture (Right Hon. Sir Basil S. Brooke, Bart., D.L., M.P.) has appointed Senator Sir Roland T.

Nugent, Portaferry House, Co. Down, Captain W. Maddin Scott, Millbank, Omagh, Co. Tyrone, and Mr. W. Magowan, 106 Hill Street, Newry, Co. Down, to be members of the Committee, and has further designated Sir Roland Nugent as Chairman of the Committee for the next period of two years, commencing on 1st October.

Producers' representatives on the new Committee have been appointed as follow :—

By THE ULSTER FARMERS' UNION.—John Gibson, Esq., Bay View, Greyabbey, Co. Down; W. J. Hyndman, Esq., Gortinure, Newbuildings, Londonderry; and Charles B. Smith, Esq., Cragoran, Islandmagee, Co. Antrim.

By THE ULSTER AGRICULTURAL ORGANISATION SOCIETY.—T. J. Cuddy, Esq., Cabragh, Dungannon, Co. Tyrone.

By THE NORTHERN IRELAND UTILITY POULTRY SOCIETY.—John Warnock, Esq., M.A., Rathgael, Bangor, Co. Down.

The remaining members of the Committee are those elected by the wholesale merchants of the respective classes. They are :—

Elected by LICENSED WHOLESALE DEALERS OF CLASS A.—Robert Bell, Esq., F.S.A.A., 2 Wellington Place, Belfast; S. W. Gracey, Esq., 96 Great George's Street, Belfast; James Pepper, Esq., c/o. Messrs. J. Harvey & Co., Kenlis Street, Banbridge, Co. Down; George Chesney, Esq., Ballynafie, Portglenone, Co. Antrim; and John W. Walker, Esq., 37 Cooldarragh Park, Cavehill Road, Belfast.

Elected by LICENSED WHOLESALE DEALERS OF CLASS B.—William Allen, Esq., 3 Westfield Gardens, Union Street, Lurgan, Co. Armagh; William M'Lernon, Esq., Queen Street, Magherafelt, Co. Londonderry.

The Secretary of the Committee is Mr. D. A. E. Harkness, M.A., Assistant Secretary of the Ministry of Agriculture, Stormont, Belfast.

MARKETING SCHEMES.

AGRICULTURAL MARKETING (PIG INDUSTRY) ACT (N.I.) 1934.

PIG PRICES FOR OCTOBER, 1938.

The following announcement has been made by the Pig Industry Council for Northern Ireland.

PRICES FOR DEAD PIGS.

The prices per dead cwt. for dead pigs sold by producers to curers in Northern Ireland in October, 1938, are as follows:—

Weight Class. (Dead Weight)	Grade 1.	Grade 2.	Grade 3.	U.L. or U.F.	Partly Black Pigs.
c.1.0.21 to c.1.1.13	66/11	63/11	60/11	56/11	5/- below relevant Grade Price.
c.1.1.14 to c.1.2.3	70/11	67/11	64/11	60/11	
Weight Class. (Dead Weight)	Grade A.	Grade B.	Grade C.	U.L. or U.F.	
c.1.2.4 to c.1.2.14	70/11	67/11	64/11	61/11	
c.1.2.15 to c.1.3.14	70/11	67/11	64/11	61/11	
c.1.3.15 to c.2.0.0	67/11	64/11	61/11	58/11	
c.2.0.1 to c.2.0.14	61/11	58/11	55/11	52/11	

Pig Carcases c.1.0.0 to c.1.0.20 :—63/11

(N.B. These prices are the same as those fixed for September, 1938).

Authorised cuts:—

- (a) Broken ham (dry, shank and/or shell bone break)—5% of the gross value of the carcase.
- (b) Broken ham (wet break)—12½% of the gross value of the carcase.
- (c) Shoulder-stuck carcase—3/- per shoulder affected.

The gross value of a carcase is the product of the dead weight and the relevant grade or other price per cwt.

Where portion of a pig carcase is condemned on account of disease the existence of which could not reasonably have been known to the producer before despatch to the curer, the appropriate grade price (or fixed price if the carcase weighs not less than 1 cwt. 0 qr. 0 lb. and not more than 1 cwt. 0 qr. 20 lb.) shall apply. If the carcase is wholly condemned on account of disease

the existence of which could not reasonably have been known to the producer before despatch to the curer the relevant Grade 2 or Grade B price (or fixed price if the carcase weighs not less than 1 cwt. 0 qr. 0 lb. and not more than 1 cwt. 0 qr. 20 lb.) shall apply.

The foregoing prices do not apply in the case of (a) wholly black pigs, boars, rigs or stags, sucked sows, and pig carcasses weighing under c.1.0.0 or over c.2.0.14, and (b) pigs visibly diagnosable as diseased before despatch by the producer and subsequently condemned; emaciated or screw pigs, smelling pig carcasses with definite indications of putrefaction, and pig carcasses badly abused or damaged before being handed over by the producer to the curer.

PRICES FOR WILTSHIRE PIGS SOLD ON DIRECT CONTRACT.

In the case of pigs sold alive under direct contract to Wiltshire curers the prices per dead cwt. payable for pigs delivered in respect of the month of October, 1938, are as follows:—

Weight Class. (Dead Weight)	Grade 1.	Grade 2.	Grade 3.	U.L. or U.F.	Unsuitable.
c.1.0.21 to c.1.1.13	76/11	73/11	70/11	66/11	63/11
c.1.1.14 to c.1.2.3	76/11	73/11	70/11	66/11	63/11
	Grade A.	Grade B.	Grade C.		U.L. or U.F.
c.1.2.4 to c.1.2.7	73/11	70/11	67/11		64/11
c.1.0.0 to c.1.0.20	Suitable 65/11		Unsuitable 63/11		
Over c.1.2.7	On the same basis as pigs sold dead				

(N.B. These prices are the same as those fixed for September, 1938).

PRICES FOR LIVE PIGS SOLD TO THE PIGS MARKETING BOARD (NORTHERN IRELAND).

In the case of pigs sold alive to the Pigs Marketing Board during October, 1938, the prices per live cwt., according to grade, are as follows:—

Live Weight.	Grade 1.	Grade 2.	Grade 3.	Unsuitable.
c.1.1.14 to c.1.2.13	49/6	49/6	49/6	48/-
c.1.2.14 to c.2.0.0	57/9	55/6	53/3	48/-
c.2.0.1 to c.2.1.14	51/9	49/6	47/3	45/-
c.2.1.15 to c.2.2.7	49/6	47/3	45/-	42/9
c.2.2.8 to c.2.2.21	45/-	42/9	40/6	38/3

(N.B. These prices are the same as those fixed for September, 1938).

These prices do not apply to live pigs under c.1.1.14 or over c.2.2.21, live pigs intended for breeding, live boars, live sucked sows, rigs or stags, injured or diseased pigs, live in-pig gilts, or live pigs sold (on contract registered with the Pig Industry Council) to curers in Northern Ireland. All other live pigs inside the weights c.1.2.0 to c.2.2.21 can be sold only to the Board.

AUTHORISED DEDUCTIONS.

Every pig (dead or alive) sold to a curer or to the Pigs Marketing Board is subject to a levy at present amounting to 4/-.

In addition to this amount, a deduction of 4d. per pig may be made in the case of sales to curers to cover insurance, so that the producer will not suffer financial loss if the carcase is condemned as unfit for human consumption.

COST OF STANDARD PIG RATION.

The average retail cash price per cwt. of the standard ration for the sixteen weeks' period ended 24th September was 9/6d. The average price for the similar period ended 20th August was 9/9d. These figures have been calculated by the Ministry from returns collected from 10 representative centres in Northern Ireland.

The following is the ration upon which the feeding cost is based:—

Maize Meal	...	...	...	30%
Barley Meal	...	...	...	30%
White Pollards	...	...	...	20%
White Bran	...	...	...	10%
Meat Meal (60% Protein)	...	...	...	10%

GRADING STATISTICS.

Table showing the percentages of pig carcases falling within the weight and grade classes indicated during July, 1938.

Under c.1.0.21		c.1.0.21 to c.1.1.13					c.1.1.14 to c.1.2.3					Totals
Suitable	Un-suitable	Grade 1	Grade 2	Grade 3	U.L. & U.F.	U.	Grade 1	Grade 2	Grade 3	U.L. & U.F.	U.	
1.51	.19	3.19	1.79	.63	.26		5.28	6.07	3.14	1.59	.03	23.68
Grade A.				Grade B.				Grade C.				
1	2	3	4	1	2	3	4	1	2	3	4	
9.18	18.65	2.70	.45	7.01	18.95	3.27	.84	2.49	7.82	1.11	.21	72.68

Ungraded Carcasses.						
Under Grade A measurements. U.L.	Over Grade C measurements U.F.	Wholly condemned U1.	Wholly black, injured or damaged U2.	Overweights, boars, sows, etc. X.	Partly Black Y.	
.05	2.63	.02	.46	.47	.01	3.64
Total						100%

These figures have been calculated from the purchase and grading statements which the curers furnish to the Ministry.

The volume of business in pig carcasses during the month of July, 1938, was considerably smaller than in June. The average value per carcass cheapened by a further 1/10d. to £5 9s. 0d. The average carcass was 2 lb. lighter at c.1.2.16 lb. and the average price per cwt. declined by 10d. to £3 6s. 1d.

The following table gives the percentage results of an analysis of the purchase and grading statements furnished by Wiltshire Bacon Curers in respect of live pigs delivered on direct contract by producers during the month of August, 1938.

Weight Class.	Grade 1.	Grade 2.	Grade 3.	Unsuitable U.L. or U.F.	Total
Under c.1.0.0					.05
c.1.0.0 to c.1.0.20					.73
c.1.0.21 to c.1.2.3	48.31	35.14	6.17	1.81	91.43
	Grade A.	Grade B.	Grade C.		
c.1.2.4 to c.1.2.7	1.22	1.32	.44	.10	3.08
c.1.2.8 to c.1.3.14	1.08	2.35	.98	.30	4.71
				Total	100.00

The average net price per cwt. in respect of these deliveries works out at £3 11s. 5d. after making allowance for insurance and contribution to the Pigs Marketing Board.

The average weight works out at c.1.1.18½, the net average price per pig being £5 1s. 2d.

MILK AND MILK PRODUCTS ACTS (N.I.) 1934—1938.

DETERMINATION OF THE JOINT MILK COUNCIL FOR NORTHERN
IRELAND IN RESPECT OF THE PERIOD 1st OCTOBER, 1938,
TO 30th SEPTEMBER, 1939.

PART I. PRODUCERS' PRICES.

(1) During the periods specified hereunder milk of Grade A, Grade B, and Grade C, sold otherwise than in bottles or cartons by the holder of a Producer's licence (hereinafter referred to as the "Producer"), to the holder of a Distributor's licence (hereinafter referred to as the "Distributor"), shall be sold at the following prices for level quantities of not less than two gallons per day delivered at the distributor's premises :—

1st October, 1938, to 30th April, 1939, inclusive :

Grade A—not less than 1/5d. per gallon.

Grade B—1/3d. per gallon.

Grade C—1/3d. per gallon.

1st May, 1939, to 30th September, 1939, inclusive :

Grade A—not less than 1/3d. per gallon.

Grade B—1/1d. per gallon.

Grade C—1/1d. per gallon.

(2) Where milk is bottled by the Producer the Distributor shall pay to the Producer not less than 1½d. per gallon in respect of this service, bottles and caps being supplied by the Distributor.

(3) The above prices are subject to a deduction in respect of carriage (hereinafter referred to as a "Collecting Charge"), when this service is performed by the Distributor.

(4) The maximum collecting charges which may be deducted from the above prices are as follows :—

(a) When the distance between the Distributor's premises and the point at which the milk is collected or the Producer's Farm (whichever is the nearer to the Distributor's premises)—

	per gal.
does not exceed 5 miles 	¾d.
exceeds 5 miles but does not exceed 10 miles ...	1d.
exceeds 10 miles but does not exceed 15 miles ...	1¼d.
exceeds 15 miles but does not exceed 20 miles ...	1½d.
exceeds 20 miles but does not exceed 25 miles ...	1¾d.
exceeds 25 miles but does not exceed 35 miles ...	2d.
for each 10 miles or part thereof in excess of 35 miles	
an additional charge of 	½d.

- (b) Where the Distributor's premises are situated in the County Borough of Belfast, the scale of maximum collecting charges set forth above shall apply with the substitution of the General Post Office for the Distributor's premises.
- (c) Where milk is delivered by rail to Belfast County Borough so as to arrive after 9.30 a.m., the Distributor may deduct $\frac{1}{4}$ d. per gallon from the price payable to the vendor, in addition to any collecting charge which may be deducted in respect of the carriage of the milk by the Distributor from the railway terminus in Belfast County Borough to his premises.

PART II. SALE BY CONTRACT.

(1) From the 1st day of October, 1938, until the 30th day of September, 1939, inclusive, all milk of Grade A, Grade B, or Grade C sold by a Producer to a Distributor in quantities of not less than two gallons per day shall be bought and sold under contract, duly registered by the Joint Milk Council (hereinafter referred to as "the Council"). Subject to the provisions of Section Seven of the Milk and Milk Products Act (Northern Ireland), 1934, all such contracts shall be in the form prescribed in the Schedule to this Determination, or in a form to a like effect, and the terms of such contracts shall be in accordance with the provisions of Part I. of this Determination entitled "Producer's Prices". All such contracts shall be submitted to the Council for registration and shall be void and unenforceable until so registered.

(2) Subject to the provisions of Section Seven of the Milk and Milk Products Act (Northern Ireland), 1934, the Council may refuse to register a Contract which is not in accordance with the aforesaid terms or in the prescribed form.

(3) The Council may refuse to register a contract if one of the parties thereto has previously been a party to a contract registered with the Council, which has been determined by reason of the non-fulfilment by that party of the terms of the said registered contract.

(4) The Distributor shall, at the time when payment is being made to the Producer for milk supplied under contract, forward to the Producer and to the Council a statement showing the period and the number of gallons to which the payment relates.

PART III. RETAIL PRICES.

(1) Subject to the provisions of Section Seven of the Milk and Milk Products Act (Northern Ireland), 1934, milk of Grade A, Grade B, and Grade C sold by retail or to a Distributor by a Producer in quantities of less than two gallons per day, and delivered to the purchaser in the following areas in Northern Ireland shall, during the periods indicated, be sold at the following prices :—

- (a) In the County Boroughs of Belfast and Londonderry, the Boroughs of Bangor and Newtownards, the Urban Districts of Carrickfergus, Holywood and Lisburn, the Rural Districts of Belfast and Castle-reagh, the portion of the Hillsborough Rural District comprised in the District Electoral Division of Breda, the portions of the Larne Rural District comprised in Eden town, the District Electoral Division of Carrickfergus Rural and the townland of Kilroot, the portions of the Lisburn Rural District comprised in the District Electoral Divisions of Dunmurry, Lambeg and Malone :
- (i) from the 1st day of October, 1938, to the 31st day of May, 1939, inclusive, and from the 1st day of August, 1939, to the 30th day of September, 1939, inclusive :
- Milk of Grade A—not less than 2/2d. per gallon.
Milk of Grade B—2/- per gallon.
Milk of Grade C—1/10d. per gallon.
- (ii) from the 1st day of June, 1939, to the 31st day of July, 1939, inclusive :
- Milk of Grade A—not less than 2/- per gallon.
Milk of Grade B—1/10d. per gallon.
Milk of Grade C—1/8d. per gallon.
- Provided that milk sold by retail in bottles containing not more than one-third pints may be sold at not less than 1/8d. per gallon.
- (b) In the Borough of Coleraine and the Urban Districts of Armagh, Ballymena, Ballymoney, Banbridge, Dungannon, Enniskillen, Larne, Lurgan, Newry, Omagh, Portadown and Strabane :
- (i) from the 1st day of October, 1938, to the 30th day of April, 1939, inclusive :
- Milk of Grade A—not less than 2/- per gallon.
Milk of Grade B—not less than 1/10d. per gallon.
Milk of Grade C—not less than 1/8d. per gallon.
- (ii) from the 1st day of May, 1939, to the 30th day of September, 1939, inclusive :
- Milk of Grade A—not less than 1/10d. per gallon.
Milk of Grade B—not less than 1/8d. per gallon.
Milk of Grade C—not less than 1/6d. per gallon.
- (c) In the Urban District of Ballycastle, Donaghadee, Newcastle, Portrush, Portstewart, Warrenpoint and Whitehead :
- from the 1st day of October, 1938, to the 30th day of September, 1939, inclusive :
- Milk of Grade A—not less than 2/- per gallon.
Milk of Grade B—not less than 1/10d. per gallon.
Milk of Grade C—not less than 1/8d. per gallon.

(d) In all other areas in Northern Ireland :

(i) from the 1st day of October, 1938, to the 30th day of April, 1939, inclusive :

Milk of Grade A—not less than 1/10d. per gallon.

Milk of Grade B—not less than 1/8d. per gallon.

Milk of Grade C—not less than 1/6d. per gallon.

(ii) from the 1st day of May, 1939, to the 30th day of September, 1939, inclusive :

Milk of Grade A—not less than 1/8d. per gallon.

Milk of Grade B—not less than 1/6d. per gallon.

Milk of Grade C—not less than 1/4d. per gallon.

(2) Exceptions :

(a) (i) A daily quantity of not less than two gallons of milk of Grade A or milk of Grade B in bottles or cartons or of milk of Grade C may be sold to one consumer at not more than 4d. per gallon less than the appropriate retail price.

(ii) A daily quantity of not less than two gallons of milk of Grade A or milk of Grade B in sealed churns may be sold to one consumer at not more than 6d. per gallon less than the appropriate retail price.

(iii) Milk sold by retail and collected by the purchaser from the vendor's premises may be sold at not more than 4d. per gallon less than the appropriate retail price :

Provided that in no case may milk be sold at less than the appropriate producer's price fixed by Part I of this Determination.

(b) Milk of Grade A, Grade B, or Grade C, sold for the purpose of the manufacture of ice cream to a person whose main business is the manufacture and sale of ice cream, may be sold at not less than one penny per gallon more than the appropriate producer's price fixed by Part I of this Determination.

(c) Milk sold to public hospitals may be sold at not less than the appropriate producer's price fixed by Part I of this Determination.

(d) Milk sold to an education authority within the meaning of the Education Acts (Northern Ireland), 1923 to 1936, for the purpose of a scheme for the provision of meals for children in attendance at public elementary schools within the education area, or to a nursery school recognised by the Ministry of Education under the Education Acts (Northern Ireland), 1923 to 1936, may be sold at not less than the appropriate producer's price fixed in Part I of this Determination.

THE CATTLE INDUSTRY (EMERGENCY PROVISIONS) ACTS, 1934 AND 1935 AND THE LIVESTOCK INDUSTRY ACT, 1937.

The following is a summary made under these Acts up to and including 24th September, 1938.

<i>Live Weight</i>	<i>Number of Animals</i>	<i>Total amount paid.</i>		
		£	s.	d.
England and Wales ..	4,434,768	10,772,237	1	1
Scotland ..	1,362,907	3,520,491	17	8
Northern Ireland ..	463,422	977,750	13	6
Total (United Kingdom) ..	6,261,097	15,270,479	12	3
<i>Dead Weight</i>				
England and Wales ..	138,371	347,258	3	9
Scotland ..	41,666	119,017	16	6
Total (Great Britain) ..	180,037	466,276	0	3

NUMBERS CERTIFIED FOR SUBSIDY.

The numbers of fat cattle certified for payment of subsidy, published by the Livestock Commission in respect of the month of August, 1938, are shown hereunder.

	August, 1938.					Corresponding totals in	
	Home-bred.		Imported		Total	August, 1937	August, 1936
	Ordinary Grade	Quality Grade	Ordinary Grade	Quality Grade			
England ..	25,458	36,525	7,288	19,939	89,210	88,511	91,371
Wales ..	2,731	2,655	52	221	5,659	5,327	6,398
Scotland ..	2,735	14,049	1,567	10,628	28,979	26,943	28,169
Northern Ireland	5,719	1,411	641	335	8,106	7,101	10,039
United Kingdom	36,643	54,640	9,548	31,123	131,954	127,882	135,977

As the great majority of fat stock markets are held on the early days of the week the rate of marketing of fat cattle cannot be judged accurately from the number of animals marketed in a calendar month. For comparative purposes appropriate weights are applied by the Livestock Commission to each day of the week, and the figures for each calendar month are adjusted accordingly, so as to allow as far as possible for the fact that a large number of markets are held on Mondays, and that the number of markets held decreases day by day as the week proceeds. The adjusted figures for August, 1938, 1937 and 1936 are 119,583, 119,471 and 133,490 respectively.

The average prices per live cwt. of certified cattle in August, 1938, were :—

	August, 1938						Corresponding averages in			
	Ordinary Grade		Quality Grade		Average		August, 1937		August, 1936	
	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.
England	37	11	40	10	39	10	41	8	—	—
Wales	37	11	40	3	39	2	40	10	—	—
England & Wales ..	37	11	40	10	39	10	41	8	36	5
Scotland	38	6	42	7	42	1	47	11	39	0
Northern Ireland ..	35	9	36	10	36	0	39	10	33	6
United Kingdom ..	37	8	41	4	40	1	42	10	36	9

MARKETING OF FRUIT ACT, 1931.

With the advent of the apple export season, the question of the desirability or otherwise of any modification in the Rules made under the Act has been under consideration. In particular the subject of containers to be used for the shipment of apples has been reviewed.

Hitherto graded apples intended for export to Great Britain or the Isle of Man were required to be packed in boxes (British standard, half bushel or box X), barrels (10 stone), half barrels (kegs) or quarter barrels (half kegs). The ten stone barrels could also be used under special permit for the shipment of "Culls".

Experience of the last shipping season has shown that the ten stone barrel is falling into disuse as a container for graded apples, a change in practice which may be partly due to the fact that this type of container may now also be used for "Culls" under the conditions already mentioned, and that there is thus a possibility of confusion arising as between consignments of graded fruit and those which may consist of "Culls", notwithstanding the Ministry's requirements as to marking. It has, therefore, been decided that the ten stone barrel be removed from the list of containers approved for shipment of graded apples, and that this type of container may in future be freely used for the shipment of "Culls", special permits for the latter purpose being no longer required.

New Rules under the Act entitled the Marketing of Fruit (Consolidation) Rules (Northern Ireland), 1938, have now been made to give effect to these alterations, which came into operation immediately after their publication.

The new Rules include a further provision giving statutory force to the administrative arrangement which has hitherto prevailed, whereby consignments of apples for export are required to be accompanied by a form of return (M.F. 10) giving particulars of the consignment and the destination

for which it is intended. This return must be furnished to the carrier or person conveying the apples, a separate return being required for each load and for each separate consignee. The furnishing of such returns is now made a condition to be observed by persons holding licences or permits under the Act.

The issue of new Rules giving effect to the changes above-mentioned provided an opportunity for consolidating in one set of Rules the various regulations which have been made from time to time, and which were the subject of separate statutory Rules. Six such separate instruments were still in operation prior to the issue of the consolidating Order.

AGRICULTURAL NOTES.

SEASONAL FARM NOTES.

POTATOES.—The lifting and storing of main-crop potatoes should be completed as soon as possible. The separation of the saleable potatoes from the chats, and the tubers which are diseased or sunburned, should be done at lifting time, and only the sound saleable potatoes pitted. This practice will not only prevent disease from spreading to the sound tubers during storage, but will save time later on and will permit making use of the unsaleable tubers by feeding them to pigs and poultry while they are in a condition for doing so.

STORING IN PITS.—A point to which more attention should be paid is the position selected for the pits of potatoes. If pits are placed throughout the field it will not be possible to cart potatoes away from them when the field is wet; moreover, the soil will be poached in the neighbourhood of the pits, and there is a risk of the ground being contaminated with weed seeds from the covering used on the potatoes. The potatoes should be carted at lifting time to pits made convenient to a roadway and in as sheltered a site as possible.

Potato pits should be well thatched with straw before any earth is put on. Not only will this make the work of lifting the potatoes from the pits much more pleasant, but will also ensure that the tubers are clean and free from soil, and enable easy identification being made of any diseased and sunburned tubers which may have been overlooked at the time of digging.

Ventilation should be provided by leaving a space of about 8 or 10 inches at the apex of the pit uncovered for a week or two after pitting. This space can be covered over when the pit is being finally earthed up before winter frosts are expected.

STORING IN HOUSES.—This is a very convenient way of storing potatoes if suitable houses are available. To be suitable for this purpose a house must be dry and frost proof, also there should be no possibility of rain

beating in on the potatoes, or of any dampness coming up from the floor. Potatoes should not be piled too deeply in houses, as heating and rotting are very liable to occur in a deep pile. The depth of the pile will depend on the condition of the tubers, but a pile of from 2 to 2½ feet high should be suitable under average conditions. The door and windows of the house may be left open during the day-time to provide ventilation, especially during the first weeks following storage.

CLEANING OF POTATO GROUND.—The potato ground should be harrowed and the stalks and weeds collected into heaps for removal or for burning if the weather is suitable for drying them sufficiently to enable this being done. Potatoes which have been left in the ground at lifting time should be gathered and used for feeding purposes.

OATS.—Huts of oats still in the fields should be carted and stacked as soon as weather permits. Stacks should be well thatched, and the thatch roped to prevent it from being blown off during the winter and to ensure that the corn will remain protected from rain. Thatching of corn stacks should be done only when the butts of the sheaves are dry.

MANGELS.—There will be risk from now onwards of damage to mangels by frost, and this crop should be lifted and stored without delay if not already lifted. Mangel clamps should be covered with old dry grass or with straw to provide protection against frost.

WINTER WHEAT.—If winter wheat has not already been sown the ground should be prepared immediately the weather is suitable, and the seed sown. The earlier the seed is sown the better the braird and the greater the resistance of the young plants to frost. Varieties such as Queen Wilhelmina and Square-head's Master have given good results in Northern Ireland. If it is desired to sow any other variety the County Instructor, who will have a knowledge of local conditions, should be consulted. The wheat seed should, in all cases, be treated before sowing with one of the powders such as "Ceresan" or "Agrosan G" to prevent diseases such as smut and leaf stripe, which are carried by the seed. Full particulars of the method of applying the powder, and of the quantity to use, are given on the package.

WEEDS.—If stubble ground is harrowed after the crop has been carted off many weed seeds will germinate. The young plants will be killed later by frost, and thus the ground will be cleaned to some extent.

DESTRUCTION OF RUSHES.—Where rushes are abundant and the land is not water-logged, considerable improvement can be effected by cutting the rushes close to the ground now and by applying a dressing of lime. Advantage should be taken of the Land Fertility Scheme to obtain lime at reduced prices. Burned lime should be used if it can be obtained, and care should be taken

to see that the lime is spread as soon as it is "slaked". If lime is allowed to get into a state of "putty" before it is spread there will be much loss due to uneven spreading.

PLOUGHING.—Early ploughing exposes the soil to winter frosts and thus aids considerably in obtaining a good seed bed in spring. It is, therefore, wise and advantageous to push ahead with the ploughing of stubble land as opportunity offers so that the upturned soil may get the full benefit of the mellowing effects of the frosts.

MANURING OF GRASS LAND.—If it is intended to apply phosphatic manure to grass land, now is a suitable time to do so. The great majority of fields of grass land in Northern Ireland which have not received phosphates in recent years will benefit from a dressing of phosphatic manure applied during the autumn. Basic slag, gafsa rock phosphate and Semsol are suitable sources of phosphate for application at this season of the year, and a dressing of about 6 cwt. per statute acre of either of these is recommended. If the field is covered with a "mat" of old grass a thorough harrowing to tear up the mat will be necessary before applying the manure if the full benefits from the dressing are to be obtained. Gafsa rock phosphate and lime should not be applied in the same season.

SEASONAL LIVESTOCK NOTES.

WINTER RATIONS.—With the approach of the winter feeding period farmers are urged to consider very carefully the question of providing economical rations for their stock. While it is possible to purchase proprietary meal mixtures which give good results, it is generally more economical to buy the constituents required, and mix these on the farm.

Examples of rations for dairy cows are given in Leaflet No. 16, while Leaflets 35 and 45 give examples of suitable meal mixtures for feeding to fattening pigs and to sows and young pigs, respectively.

The choice of rations will be determined by the current prices of the feeding stuffs under consideration, and the method of comparing the prices of feeding stuffs will be found on page 333 of this report.

A ration which has given good results when fed to fattening cattle is made up of—

- 2 parts by weight crushed oats.
- 2 " " " maize meal.
- 1 part " " decorticated earthnut cake.

A small quantity of linseed cake may be added during the finishing period.

A suitable ration for young store cattle is made up of—

- 2 parts by weight crushed oats.
- 1 part " " maize meal.
- 1 " " " decorticated earthnut cake.

This ration may be given at the rate of from 2 to 3 lb. per head daily. There is no advantage in getting store cattle into a semi-fat condition during winter, as if this is done they will lose condition when turned out in spring. Store cattle should be fed with the object of maintaining reasonable condition and steady growth, and should be kept outside as much as possible during suitable weather. Houses for store cattle should be airy, well lighted and well ventilated. It is very important that the cattle should have a dry bed on which to lie when in the houses or sheds.

SHEEP.—Rams, especially those which are expected to attend to more than 10 or 12 ewes, should be kept in a fit condition by feeding an allowance of concentrates. A mixture of equal parts of oats, kibbled maize and linseed cake is suitable for this purpose.

LIVER FLUKE DISEASE.—Precautionary measures should be taken against this disease by keeping the sheep on dry, well-drained fields. Carbon tetrachloride capsules, containing 1 cubic centimetre of carbon tetrachloride each, should be given to the sheep. The dose for each sheep is one capsule. In the case of sheep receiving a ration of concentrates, this should be discontinued for at least four days prior to the giving of carbon tetrachloride. Further particulars regarding the control of this disease are given in Leaflet No. 24.

FOOTROT.—Footrot is liable to be a source of trouble in sheep at this time of year, and immediately any signs of lameness appear amongst the flock the affected sheep should be examined and treatment given. A suitable dressing for footrot is a solution of 1 lb. copper sulphate (bluestone) in 1 gallon water. If a large flock has to be treated the solution can be placed in a foot-bath and the sheep driven through it. If this is done the depth of solution in the foot-bath must not exceed $1\frac{1}{2}$ inches. In severe cases the horn of the hoof should be well pared with a knife and a dressing consisting of 1 oz. powdered copper sulphate, 1 oz. turpentine and $\frac{1}{2}$ lb. lard applied. The foot should then be bandaged. Further information on the treatment of footrot is given in Leaflet No. 63.

PIGS.—It will be economical to feed unsaleable potatoes to pigs at this time of year. Potatoes for this purpose should always be boiled. The use of potatoes will considerably reduce pig feeding costs if they are given in correct proportions along with meals. Examples of suitable meal mixtures for use along with potatoes are given in Leaflet No. 35.

FARROWING PENS.—Sows farrowing from now onwards will require particular attention, especially as regards housing accommodation. The farrowing pen should be made comfortable and reasonably warm, consistent with adequate ventilation and lighting. Conditions which provide an equable temperature in the pen should be aimed at as far as possible, and all factors which

are calculated to cause chills eliminated. It is preferable to have each sow farrow and rear her litter in a separate house or pen than to have two or more sows in pens in the same house.

FEEDING OF YOUNG PIGS.—Winter litters require more attention than those born in the summer. The feeding of the young pigs in a “creep” to which the sow cannot gain access is a practice which should be universally adopted, especially during the winter months. The little pigs can be taught to eat by feeding the mother from a shallow trough in the pen on a few occasions. Afterwards the trough should be placed behind the bars of the “creep” and out of reach of the sow. The bottom bar should be just high enough from the floor to permit the little pigs to get underneath and so gain access to the food trough. Examples of suitable rations to feed to young pigs at this stage are given in Leaflet No. 45.

SEASONAL GARDEN AND ORCHARD NOTES.

LIFTING AND STORING CARROTS AND BEET.—Carrots and beet sown in April and May will now have attained their full size and should be lifted. Care must be taken to see that no damage is caused to the beet during lifting, and to avoid possible damage the leaves should be removed by twisting them off instead of by cutting with a knife, which, however, can be done in the case of carrots. Both carrots and beet can be stored between layers of sand, or partially dry soil, in a moderately dry place where they will not be exposed to the winter rains. Parsnips may also be lifted now and stored in the same way as carrots and beet but generally these may be allowed to remain in the ground until required. When periods of severe weather are expected a supply of parsnips, sufficient to last for a week or so, should be lifted and stored before the ground becomes frozen hard.

POTATOES.—Maincrop potatoes should now be lifted. If the tubers are to be stored in houses care should be taken to ensure that these are frost proof. The “seed” for next year should be selected at digging time and placed in sprouting boxes.

DIGGING AND TRENCHING.—As the vegetable ground becomes vacant it should be manured and dug or trenched as required. Garden refuse such as leaves, decayed annual weeds and any other soft (not woody) rubbish may be incorporated with the soil as the work proceeds.

CELERY.—The final earthing up of main-crop celery should be carried out about the middle of October. The soil should be made fairly firm around the neck of each plant and sloped with a spade so that the rain is thrown away from the plants.

APPLES.—The picking and storing of the apple crop should be completed as soon as possible. Only sound fruit should be brought into the store. Wind-falls and badly blemished fruit should be disposed of as soon as possible and not stored.

PLANTING FRUIT TREES.—Supplies of fruit trees and bushes should be ordered from the nurseryman without delay. By placing the order early there is a better chance of obtaining satisfactory plants than there is when the trees are ordered late in the planting season. Care should be taken to ensure that raspberry canes for planting are obtained from stocks free from virus diseases such as Mosaic. Planting can be carried out from now onwards whenever the ground is in a suitable condition. Notes on planting and a list of varieties of the different kinds of fruit trees and bushes recommended are given in Leaflet No. 15.

PRUNING.—If the removal of the old fruiting wood of black currants, raspberries and loganberries, was carried out immediately after the fruit was gathered, as advised, there should be little to do now beyond the removal of overcrowding branches and canes. The canes of raspberries and loganberries should be tied into position as soon as possible.

SPRAYING MATERIALS.—Supplies of materials for spraying fruit trees should be ordered now, so that advantage of every favourable opportunity can be taken to carry out this important work. In some seasons the number of days suitable for spraying is very limited, and often the work is delayed, with the result that it is imperfectly done.

FLOWERING PLANTS.—Plants of dahlias, begonias, geraniums, etc., should be lifted before they are damaged by frost. The dahlias and tuberous rooted begonias must be stored in a frost-proof building while fibrous rooted begonias and geraniums may be potted up and grown on in a glass-house for the winter. Chrysanthemums grown in the soil out of doors during the summer should be lifted now and replanted in the soil of the glass house. The house should be kept closed for a couple of days until the plants begin to root again. After this, ample ventilation should be given on all favourable occasions.

GLASS HOUSES.—These should be thoroughly cleansed as they become vacant, using a good disinfectant such as emulsified cresylic acid for the purpose. Ventilators must be kept wide open while this work is in progress, but afterwards they should be kept closed for at least 48 hours. The houses must be well ventilated before any green plants are again brought into them.

BEEES.—Stocks of bees should be examined, and if there is any shortage of food supply this should be made good by placing a cake of candy immediately over the bar frames. A fresh cake of candy should be given as required. As a preventive measure against Acarine disease, bee-keepers should treat all

stocks with "Frows Mixture" early in the winter, as this disease is still prevalent in the country. Particulars of the life history of the causative organism of Acarine disease, and of the method of treatment, are given in Leaflet No. 76.

SEASONAL POULTRY-KEEPING NOTES.

FEEDING AND MANAGEMENT OF PULLETS.—Every effort should be made to maintain a good egg production through the winter. Liberal feeding, combined with comfortable and adequate housing, aid in promoting full production.

It is a great help if houses are big enough and well enough lighted to hold the hens comfortably so that they may be kept in the house on wet cold days, and kept scratching through ample litter on the floor of the house. Great care must be exercised in the feeding of pullets. The birds should not be given more mash than they can eat within a reasonable time, otherwise this food lying in the troughs will become sour and may do considerable harm to the birds. Only carefully balanced rations should be used, and forcing foods should be avoided. Full particulars of suitable mash and grain mixtures for winter egg production purposes are given in Leaflet No. 3.

HOUSING.—The provision of suitable houses for poultry is essential if poultry keeping is to be successful. The portable type of house which can be moved readily from place to place and from field to field, is the most suitable and satisfactory for average farm conditions. Leaflet No. 21 gives the plans and specification of a portable poultry house. If a stationary house is to be erected it should, if possible, be built between two fields or in a corner of a field adjacent to three other fields. This would permit having fresh grass for the poultry every second year in an eight-year rotation. It would also facilitate making use of the stubbles in autumn, but even with this system it will be found that the birds will frequent the ground in the neighbourhood of the house which will become dirty and bare of grass. A poultry house for winter layers should be warm, have a dry floor, have good solid walls on the North, West and East sides, and windows in the South side. Draughts must be avoided and good ventilation provided. The windows should be arranged so that there is good light on the floor to enable the birds to see the grain in the litter.

LIMEWASHING.—The periodical application to the inside of the house of lime wash, to which a small quantity of paraffin oil has been added, will be found to have a beneficial effect upon the general health of the birds, as well as brightening up the house. Lime wash, however, must not be applied over dirt, and the walls should be thoroughly cleaned before lime washing them.

BREEDING STOCK.—This flock requires careful attention now. If possible, the breeding flock should be given free range over fresh pastures and portable houses, if available, should be used for accommodating the birds. The breeding stock should be fed in such a way as to keep the birds fit and healthy

rather than to stimulate excessive egg production. If milk is available some should be given to the breeders, as it is a very valuable food and has a beneficial effect on hatchability and rearability of the chickens. The addition of cod liver oil to the mash at the rate of 1 pint to each 4 stones of mash is also recommended as an aid to good hatchability and rearability. Further particulars of rations suitable for breeding birds are given in Leaflet No. 83.

BLOOD TESTING OF POULTRY.—It is important that all breeding stock should be blood tested and “carriers” of Bacillary White Diarrhoea disease eliminated. Those desiring to blood test their stock should make application immediately to the Poultry Instructor for the district, who will make the necessary arrangements. When purchasing eggs for hatching care should be taken to purchase only from poultry-keepers who can produce blood-testing reports to show that their flock is free from “carriers” of the disease.

FATTENING OF TURKEYS.—Turkeys intended for the Christmas market should be liberally fed from now onwards. Two feeds of soft mash, wet with separated milk or buttermilk, if available, should be given daily. A supply of grain should be fed in the evening just before the birds go to roost.

TURKEYS FOR BREEDING.—Turkeys intended for breeding should be selected now and kept apart from the fattening flock, and should receive body building foods rather than fattening foods so as to keep them in a good fit condition.

TABLE CHICKENS.—This is a good time to hatch eggs for the production of table chickens, as the birds will be ready for market when the demand and price are usually good. The most suitable breed for this purpose is the Light Sussex or first crosses between that breed and a general purpose breed such as the White Wyandotte or the Rhode Island Red. If a first cross is to be used the male should be of the Light Sussex breed, as such a mating will give birds which have many of the characteristics of that breed.

KEEPING EGGS CLEAN.—A great deal of labour in cleaning eggs during winter will be saved if simple precautions are taken to keep the floors of hen houses dry. It will also help if the bottoms of the nests are made of netting wire of fine mesh. The ground in the vicinity of poultry houses should also be kept clean by spreading gravel or cinders on it or by covering it with grass or straw. Dirty eggs are now classed as “Seconds” and are subject to deductions from the standard price. To get top price the eggs must, therefore, be clean as well as fresh, and it is more economical of time and labour to prevent the eggs from being soiled than to clean them after they have become soiled. Hence the wisdom of taking precautions to prevent soiling. Leaflet No. 27 gives useful hints on the subject.

ANNOUNCEMENTS AND REMINDERS.

GENERAL.

LEAFLETS.—Copies of Leaflets mentioned in this Report can be obtained free from the Ministry on request.

COUNTY POULTRY STATIONS.—The egg distribution season at County Poultry Stations begins on the 1st November. Lists giving the names and addresses of station holders in each county will be available soon, and may be had from the Secretary of the County Committee of Agriculture, free, on request.

AUTUMN SHEEP DIPPING.—The autumn sheep dipping period extends this year from 10th October to 12th November. During this period all sheep must be dipped twice, allowing an interval of not less than seven or more than fourteen days between the two dippings.

LECTURES AND CLASSES.—Arrangements are now being made by County Committees of Agriculture regarding programmes of lectures to be given during the coming winter by the Instructors employed by the Committees. Requests for lectures or poultry-keeping classes to be given at particular centres should be sent to the Secretary of the County Committee of Agriculture for the County.

The following lectures have been arranged by the County Down Committee of Agriculture :—

Name of Lecturer	Subject	Place where lecture will be given	Date of lecture	Time of commencement of lecture
J. H. Stewart	" Judging Vegetables at Shows."	Moneyrea Old School	Tuesday, 8th Nov.	8-15 p.m.
J. H. Stewart	" Cultivation of Fruit."	Saintfield Courthouse.	Wednesday, 9th Nov.	8-0 p.m.

BROADCASTING.—The following arrangements regarding talks and discussions on subjects of interest to farmers to be broadcast from the Northern Ireland station of the British Broadcasting Corporation, have been made :—

Date.	Subject.	Speaker.
31st October ..	Pastures in Winter.	Professor S. P. Mercer, Dean of the Faculty of Agriculture, Queen's University, Belfast.
14th November	Discussion—Specialised and Mixed Farming.	Dr. G. S. Robertson, Permanent Secretary, Ministry of Agriculture. and Mr. R. J. Hale, President of the Ulster Farmers' Union.
28th November.	Use of Lime and Fertilisers.	Professor R. G. Baskett, Queen's University, Belfast.

WINTER AGRICULTURAL CLASSES.—The centres selected by County Committees of Agriculture for the classes which will begin early in November next are as follows :—

Antrim	.. Portglenone, Ballymoney, Straid and Lylehill.
Armagh	.. Ahorey and Breagh.
Down	.. Mayobridge, Castlewellan, Ballyhalbert and Legacurry.
Fermanagh	.. Derrylin and Irvinestown.
Londonderry	.. Maghera and Ringsend.
Tyrone	.. Brackey, Eskra, Plumbridge, Drumquin, Altmore and Caledon.

Full particulars regarding the buildings in which the classes will be held, opening dates and class hours, can be obtained from the Secretary of the County Committee of Agriculture, or from the Agricultural Instructor.

These classes provide a convenient and valuable means of acquiring up-to-date knowledge of farming in all its branches, and young men in the districts in which they are to be held are strongly advised to make every effort to attend. As only a limited number of men can be admitted to each class, those desiring to take advantage of the instruction, which is free, should make application at once to the Secretary or Agricultural Organiser of the County Committee of Agriculture or to the Agricultural Instructor.

TRAINING FOR GIRLS.—The next Session at the Ulster Dairy School, Cookstown, and at the North West School, Strabane, will begin on 3rd January, 1939. The Ministry is now receiving applications for the Assisted Scholarships which enable girls to obtain board residence and tuition at the Ulster Dairy for £3 3s. 0d. for the term of about 12 weeks, while County Committees of Agriculture will receive applications for the free Scholarships to the North West School, which they provide. Applications should be forwarded as soon as possible, as the scholarships are awarded in the order in which applications are received. There is no qualifying examination for either School.

LIST OF ACCREDITED POULTRY FARMS.—The Ministry hopes to publish the list of Accredited farms for the coming season early in November.

PURCHASE OF FEEDING STUFFS.—Now that the season during which farmers and stock keepers will be purchasing supplies of feeding stuffs is nigh, it is desired to direct attention to the fact that much money can be saved, and the cost of feeding reduced considerably by paying due attention to the selection of foods, and also by adopting the practice of comparing the values of different samples. It is usually a short-sighted policy and an expensive one to buy foods solely on a cost per ton basis. Very often the food which is cheapest per ton is dearest when judged by results. Foods sold under fancy names and claimed to have special properties should, especially, be viewed with caution, particularly those offered at high prices, and the Agricultural Instructor's opinion should be obtained before purchases are made. There is little use in consulting the Instructor or the Ministry after the deal has been completed.

SCHOOL NEWS.

ULSTER DAIRY SCHOOL, COOKSTOWN.

The third term of the year 1938 terminated on the 30th September last, and the results of the examinations held at the end of the term are announced.

Miss S. M. Hamilton, Killycolp House, Tullyhogue, Dungannon, and Miss R. G. Walker, Hillhall, Lisburn, who are pursuing the senior course for teachers in training, reached the standard to justify completion of training at the school, and are now taking out a course of practical training on approved poultry farms for a period of twelve months.

The fourth term senior pupils, Miss M. Caskey, Edenmore House, Limavady, County Londonderry, Miss L. G. Irvine, Ballyvaulough, Raloo, Larne, and Miss J. Fulton, Thornhill, Ballykelly, County Londonderry, passed the examinations and are continuing their training. Miss A. Shankey, Sessia Scot, Rock, Dungannon, who specialised in Dairying, qualified for the award of a Creamery Scholarship which entitles her to a period of twenty-four weeks' training at a Creamery approved by the Ministry with a view to qualifying for the Ministry's Certificate of Competency in Creamery Buttermaking.

Miss M. Proctor, Ballytyrone, Loughgall, County Armagh, obtained first place in the third term class, and reached the standard for admission to the senior course of training with a view to qualifying as a teacher.

Miss M. Richardson, Shanecracken, Markethill, County Armagh, and Miss E. Donaghy, Tullydonnell, Silverbridge, Newry, who obtained second and third place respectively in the examination for third term pupils, gained certificates in all subjects and have been awarded free scholarships to specialise in Poultry-keeping and Dairying respectively for a further term at the school.

The following additional third-term pupils were successful in qualifying for certificates in Poultry-keeping, Dairying and Domestic Science—Miss B. Henry, Ballymacpeake, Portglenone, County Londonderry; Miss A. McAlinney, Tullyvally, Seskinore, Omagh, County Tyrone; while the following were successful in qualifying for certificates in Poultry-keeping and Domestic Science—Miss M. Conn, The Grange, Castlerock, County Londonderry; Miss A. McGlone, Main Street, Dromore, County Tyrone, and Miss M. J. Thompson, Ballee, Ballymena, County Antrim.

SCHOLARSHIP WINNERS, 1938.

The following are the names and addresses of the successful candidates for Scholarships in Agricultural Science and in Creamery Management, which were offered for competition in Northern Ireland this year:

AGRICULTURAL SCIENCE.

Five Scholarships in Agricultural Science, each of a total value of £380 and tenable at Queen's University, Belfast, were awarded by the Ministry, and one of the value of £400 by the Queen's University, Belfast, under the terms of the Gibson Bequest Scheme. The names of the successful candidates in alphabetical order are:—

- J. A. Bates, Ravenbank, Ballygowan, County Down. (Ministry's Scholarship.)
- S. Busby, Burnfoot Farm, Gransha, Islandmagee, County Antrim. (Ministry's Scholarship.)
- W. G. Huston, Kiltinney, Coleraine, County Londonderry. (Ministry's Scholarship.)
- S. M'Conaghy, Glennyloagh, Ballymoney, County Antrim. (Ministry's Scholarship.)
- W. G. Shannon, Oaklands, Broughshane, County Antrim. (Ministry's Scholarship.)
- E. G. Sherrard, Aughnabrack House, Ligoniel. (Gibson Scholarship.)

Four of the successful candidates had completed the ordinary College course in Agriculture, at Greenmount Agricultural and Horticultural College, Muckamore, Co. Antrim.

CREAMERY MANAGEMENT.

Two Scholarships in Creamery Management, each of a total value of £98 6s. 0d., and tenable at University College, Cork, were awarded by the Ministry. The successful candidates were—

- J. F. M'Hugh, Market Street, Downpatrick, County Down and
- J. J. Patterson, Dublin Road, Newtownstewart, County Tyrone.

VETERINARY RESEARCH AND THE FARMER.

The Ministry of Agriculture hereby gives notice to farmers that the Veterinary Research Division of the Ministry, whose laboratories are located at Stormont, is not in any way connected with the firm of Veterinary Research Limited, which is reported to be engaging in the sale in Northern Ireland of preparations for the treatment of various animal diseases. The Ministry does not guarantee the efficacy of any proprietary preparations, nor does it undertake to test the results of treatment therewith.

EGG LAYING TEST AT STORMONT.

The seventeenth of the series of egg-laying tests conducted by the Ministry began on 1st October, 1938.

In the interval between the return of the birds in the previous test to their owners, and the receipt of birds for the present test, the entire plant was re-conditioned. The houses were first cleaned out thoroughly, then scrubbed internally with boiling water and soft soap, and sprayed with disinfectant solution. The droppings' boards and perches were painted with creosote, while the outsides of the houses were also dressed with that material. All mash hoppers, drinking vessels and other utensils were scalded. The grass runs were sprayed with copper sulphate solution after the grass had been cut as bare as possible. Later they received a dressing of burned lime. Any house and run in which it was found that the previous birds in occupation were affected with tuberculosis, coccidiosis, or worm parasites, were specially marked and will be left vacant of birds for a year, during which time they will be dug and re-seeded. It is thus seen that drastic precautions are taken to ensure that the houses and runs at the tests are clean, thoroughly disinfected, and as safe as it is possible to make them for the new birds.

In the present test all the available suitable accommodation has been filled, and there are 127 pens of six pullets each. This shows an increase of 9 pens as compared with the previous test. In addition there is one pen entered for official recording only. The birds in this pen belong to the new breed known as "Crossgars". The following are particulars of the Sections with the number of pens in each:—

Section 1.	White Wyandottes (Open).	..	..	21 pens.
" 2.	" " (Station Holders).	..	..	10 "
" 3.	White Leghorns (Open).	..	..	10 "
" 4.	" " (Station Holders).	..	..	11 "
" 5.	Rhode Island Reds (Open).	..	..	29 "
" 6.	" " " (Station Holders).	..	..	11 "
" 7.	Any other Pure Breed.	..	..	25 "
" 8.	Poultry Clubs and Young Farmers' Clubs.	..	..	10 "

Section 7. (Any other Pure Breed) consists of:—

Light Sussex	.. 11 pens.	Ancona	.. 1 pens
Buff Rock	.. 7 "	Marans	.. 1 "
Brown Leghorn	.. 2 "	Wessummers	.. 1 "
Black "	.. 1 "	Silver Grey Dorking	1 "

Section 8. (Poultry Clubs and Young Farmers' Clubs) consists of:—

Rhode Island Reds	7 pens.	White Wyandottes	3 "
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The numbers of birds of the different breeds represented in the test are:—

Rhode Island Reds	270	Black Leghorn	.. 6
White Wyandottes	204	Ancona	.. 6
White Leghorn	.. 126	Marans	.. 6
Light Sussex	.. 66	Wessummers	.. 6
Buff Rock	.. 42	Silver Grey Dorking	6
Brown Leghorn	.. 12		

PRICES OF FEEDING STUFFS AT SPECIFIED CENTRES.

The following table shows the retail cash prices per cwt. of Feeding Stuffs at 1st October, 1938, in ten representative centres in Northern Ireland.

	Antrim	Armagh	Ballymena	Belfast	Castletown	Cole-raine	Dun-gannon	Ennis-killen	Omagh	Strabane
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Protein Foods :										
Linseed (whole) ..	14 0	16 0	16 0	16 0	—	17 6	—	17 0	—	—
Linseed Cake, home-made ..	—	13 0	12 0	12 0	—	12 6	14 0	12 0	12 6	—
Linseed Cake, foreign ..	11 6	12 0	11 6	11 0	—	12 0	12 0	10 6	11 3	10 9
Linseed Cake Meal ..	11 6	12 0	11 6	11 0	11 3	12 0	14 0	12 6	11 6	11 6
Cotton Cake, decorticated ..	—	—	9 3	10 6	10 0	9 3	10 6	10 6	10 6	9 9
Earthnut Cake, decorticated ..	9 0	—	8 9	10 0	—	9 0	10 0	9 0	10 0	9 3
Soya Bean Meal (extracted) ..	10 6	10 6	10 9	10 0	—	11 0	10 6	—	11 0	—
Fish Meal (60% protein) ..	17 0	17 0	16 6	16 6	—	16 6	16 6	17 6	16 0	16 6
Meat Meal (60% protein) ..	—	17 0	14 3	13 6	14 0	—	16 0	—	15 6	16 0
Meat and Bone Meal (40% protein) ..	—	10 6	10 6	9 6	—	10 6	9 6	—	—	11 0
Medium Protein Foods :										
Palm Kernel Cake ..	9 0	—	9 9	7 6	—	9 0	—	—	—	—
Palm Kernel Meal ..	9 0	—	9 9	7 6	—	9 0	—	—	—	—
Starchy Foods :										
Maize (whole) ..	7 6	7 6	7 6	6 3	—	7 6	7 9	—	—	—
Maize Meal ..	7 9	7 9	7 6	7 9	7 9	7 6	8 0	7 9	7 9	7 6
Maize Flaked ..	8 3	8 6	8 0	8 3	8 0	8 0	8 9	8 6	9 0	8 6
Wheat (whole) ..	8 6	7 0	8 1½	6 0	6 0	9 0	9 0	9 6	—	—
Bran, Red ..	8 3	8 6	7 3	8 0	—	8 6	8 0	9 6	8 6	8 3
Bran, White ..	9 9	9 6	9 0	9 6	9 6	9 9	10 0	10 6	10 6	10 0
Pollard, Brown ..	8 3	8 6	8 9	8 0	—	8 0	9 0	9 6	8 6	8 6
Pollard, White ..	—	9 6	9 3	9 0	9 6	8 6	10 0	10 6	10 0	9 9
Barley Meal ..	8 0	8 6	8 0	7 6	7 6	8 6	8 0	9 0	8 6	8 3
Tapioca Root Flour ..	—	—	8 0	8 0	—	—	8 0	9 0	—	—
Oats (whole) ..	9 0	7 6	9 0	7 9	5 6	6 0	8 0	8 0	5 1	5 0
Crushed Oats ..	9 0	9 6	9 6	7 0	6 0	6 6	8 6	9 0	—	6 0

NON-CONCENTRATES :— The average prices at representative markets at the beginning of October, 1938, were as follows :—
 Potatoes (Main Crop), 2/10½d. per cwt. ; Upland Hay, 56/10d. per ton ; Meadow Hay, 44/- per ton ;
 Oat Straw, 41/8d. per ton.

AVERAGE PRICES OF FEEDING STUFFS.

The following table shows the average retail cash prices per cwt. of feeding stuffs at 1st October, 1938, with comparative prices as at the first of the previous month; the costs per unit of protein equivalent and of starch equivalent are also given in respect of each month.

	Protein Equiv- alent	Starch Equiv- alent	Average price per cwt. at		Cost per unit of protein equivalent		Cost per unit of starch equivalent	
			1st Oct., 1938	1st Sept., 1938	Oct.	Sept.	Oct.	Sept.
Protein Foods			s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Linseed	19.0	119.0	16 1	17 5	16 11	18 4	2 9	2 11
Crushed Linseed	19.0	119.0	18 1	18 0	19 1	18 11	3 0	3 0
Linseed cake (home-made)	25.0	72.0	12 7	12 3	10 1	9 10	3 6	3 5
Linseed cake (foreign)	25.0	72.0	11 5	11 2	9 2	8 11	3 2	3 1
Linseed cake meal	25.0	72.0	11 11	11 9	9 6	9 5	3 4	3 3
Decorticated Cotton cake	35.0	71.0	10 0	9 9	5 9	5 7	2 10	2 9
Decorticated Earlhnut cake	41.0	73.0	9 5	9 3	4 7	4 6	2 7	2 6
Extracted Soya Bean meal	38.0	64.0	10 7	10 8	5 7	5 7	3 4	3 4
Fish meal (60% protein)	53.0	59.0	16 8	16 7	6 4	6 3	5 8	5 7
Meat meal (60% protein)	55.0	61.0	15 2	15 1	5 6	5 6	5 0	4 11
Meat & Bone meal (40% protein)	36.0	44.0	10 3	10 5	5 8	5 9	4 8	4 9
Medium Protein Foods								
Palm kernel cake	17.0	75.0	8 10	9 2	10 5	10 9	2 4	2 5
Palm kernel meal	17.0	75.0	8 10	9 2	10 5	10 9	2 4	2 5
Starchy Foods								
Maize	6.8	81.0	7 4	7 2	21 7	21 1	1 10	1 9
Maize meal	6.8	81.0	7 8	7 5	22 7	21 10	1 11	1 10
Flaked maize	8.6	83.0	8 4	8 0	19 5	18 7	2 0	1 11
Wheat	9.6	72.0	7 11	9 3	16 6	19 3	2 2	2 7
Red bran	10.0	43.0	8 4	8 5	16 8	16 10	3 11	3 11
White bran	10.0	43.0	9 10	10 0	19 8	20 0	4 7	4 8
Brown Pollard	11.0	60.0	8 7	8 7	15 7	15 7	2 10	2 10
White Pollard	11.0	60.0	9 7	9 9	17 5	17 9	3 2	3 3
Barley meal	7.0	70.0	8 2	8 6	23 4	24 3	2 4	2 5
Oats	7.6	60.0	7 1	9 2	18 8	24 1	2 4	3 1
Crushed oats	7.6	60.0	7 11	9 8	20 10	25 5	2 8	3 3
Tapioca root flour	1.0	83.5	8 3	8 5	165 0	168 4	2 0	2 0
Non-concentrates								
Potatoes	0.6	18.0	2 10½	3 0	95 1½	100 0	3 2	3 4
Upland hay	4.9	24.0	2 10	2 10½	11 6½	11 10	2 4½	2 5
Meadow hay	4.6	31.0	2 2½	—	9 7½	—	1 5½	—
Oat straw	0.9	20.0	2 1	2 3	46 3½	50 0	2 1	2 3

The object of the foregoing tables, besides providing information regarding the prices of feeding stuffs and the trend of prices, is to give purchasers a

guide as to the economic purchase of supplies. It should be understood that the price per ton is not a sound basis on which to judge whether or not a particular food or grade of a particular food is good value for money. The composition of the foods is the only basis on which different grades can be compared. The value of foods of different kinds, but of the same nature in reference to market prices, can also be compared on this basis.

In the case of an artificial manure which supplies only one fertilising ingredient as, for example, sulphate of ammonia, which supplies nitrogen, the cost of the unit of nitrogen at the price charged can be determined quite readily by dividing the price per ton by the percentage of nitrogen in the sample, and the figure thus obtained is the cost of a unit of nitrogen. By this method the most economical source of nitrogen can be ascertained. Similarly, in the cases of phosphatic and potassic manures.

With feeding stuffs, however, the same method cannot be applied to determine comparative values. This is because every feeding stuff contains three important food constituents in varying proportions. These are (1) carbohydrates, (2) oils or fats, and (3) proteins or albuminoids. The carbohydrates comprise a group of substances such as starch, sugar and cellulose. These substances supply heat or energy to the animal, and the surplus goes to form fat. They are the fuel which the animal requires to keep the body "fires" burning. The oils of a feeding stuff are also heat and energy suppliers, and the surplus is stored as fat. The oils are approximately $2\frac{1}{2}$ times more valuable than the carbohydrates as heat and energy producers, but excess in a ration may lower its digestibility and cause digestive troubles. The proteins are the most valuable and most expensive food constituent. They contain nitrogen and are the part of the food from which products which contain protein are chiefly made. Thus the protein products, such as lean meat, milk and eggs, are formed principally from protein, and young, growing animals, dairy cows and laying hens must have an adequate quantity of protein for full growth, development and production.

While all animals require a certain amount of carbohydrates, oils and proteins, the relative amounts depend on the class of stock. For example, a two-year-old fattening bullock requires much less protein than a dairy cow in milk and a fattening chicken less than a laying pullet.

There are wide differences in the composition of the different kinds of feeding stuffs. Some are rich in carbohydrates and, therefore, particularly valuable for fattening purposes. These include oats, maize, barley and wheat, and their products. Others are rich in protein and are valuable for producing flesh, milk and eggs. These include decorticated cotton cake, decorticated earthnut cake, meat meal and soya bean meal.

In the following table the composition of some of the commonly used feeding stuffs is shown—

	Water.	Protein.	Oil.	Carbohydrates.
Non concentrates				
Swede turnips ...	88	1	0.2	9
Potatoes ...	75	2	0.1	21
Cabbage ...	89	1.5	0.5	8
Oat Straw ...	14	4	2	37
Meadow hay ...	10	10	3	45
Pasture grass ...	80	3.5	0.8	10
Fattening Foods				
Crushed oats ...	13	9	6	60
Maize meal ...	12	10	4	70
Barley meal ...	13	12	2	66
Pollard ...	13	15	5	57
Flesh forming foods				
Decorticated Cotton cake ...	9	40	9	26
Decorticated Earthnut cake ...	10	46	7	23
Meat meal ...	11	60	6	—
Soya bean meal ...	11	44	1.5	32

The problem confronting the purchaser of feeding stuffs, who is concerned with the business of getting best value for money, is one which is much more difficult to solve than is the case with artificial fertilisers. There are at least four aspects of the problem to be considered :

- (1) The quality of the different foods offered for sale. This can be determined by reference to the particulars of composition which a seller must give a purchaser in accordance with the Fertilisers and Feeding Stuffs Act.
- (2) The physical condition of the foods, and if fresh or stale.
- (3) The suitability of the foods for the purpose in view.
- (4) The comparative values of the foods at the prices quoted.

The chief concern of this section of the Report is comparative values and, therefore, that aspect of the problem will be considered specifically.

The proteins play a part in the nutrition of the animal which cannot be taken by either carbohydrates or oils. In addition to this, the proteins, carbohydrates and oils have very different values for the production of energy or fat. It therefore follows that the simple procedure of totalling the percentages of these three ingredients and dividing this total into the price per ton in order to obtain a value for a unit of the food-stuff is quite unsound. Various methods have been used to compare the values of different feeding stuffs, but none is completely satisfactory. For practical purposes the least cumbersome is the

method whereby the food-stuffs are placed in groups of similar composition, and the values of the members of each group are then compared by consideration of (a) their protein equivalents, and (b) their starch equivalents. The starch equivalent is the number of pounds of starch which would be required to produce the same amount of "fat" in an animal as 100 pounds of the food-stuff in question. It is essentially a measure of the fat-producing value of the food-stuff. The protein equivalent is the number of pounds of digestible true protein, plus half the number of pounds of non-protein nitrogenous substances such as amides, present in 100 pounds of the foodstuff. It is a measure of the value of the food-stuff to the animal as a source of protein.

By this method all foods can be reduced to comparable standards based on (1) the protein equivalent, and (2) the starch equivalent.

The next stage in comparing values is to determine the cost of a unit of protein equivalent and of starch equivalent in the different foods which are being compared, and to enable the reader to do this the protein and starch equivalent figures for the different foods are given on the table on page 333, and also the cost per unit of protein equivalent and of starch equivalent in each case. These costs have been determined by dividing the protein equivalent figure and the starch equivalent figure, respectively, into the current price per ton, and the lower the quotient figures thus obtained the cheaper is the particular food as a source of protein or of starch equivalent as the case may be.

However, it would be quite misleading to compare the cost of a unit of protein equivalent in a protein food (which is purchased principally for its protein) with the cost of a similar unit in a starchy food. In other words, foods such as maize meal and pollard cannot be compared on the basis of cost of protein equivalent with foods such as decorticated cotton cake and meat meal.

The best course to adopt is to consider for what purpose the particular food is required, decide what foods are suitable for that purpose, examine the samples of these different foods which are offered and, if all appear to be satisfactory, apply the unit value system of determining which one provides protein equivalent or starch equivalent at the cheapest rate. A few examples may be helpful in explaining the procedure.

- (1) Suppose it is intended to purchase a protein food for the purpose of balancing a ration for dairy cows. The protein foods suitable for dairy cows are decorticated cotton cake, decorticated earthnut cake and soya bean meal. From the table on page 333 it is seen that at the current average prices of these foods the cost of the unit of protein equivalent in each is as follows:—

Decorticated cotton cake	...	...	5/9d.
Decorticated earthnut cake	...	...	4/7d.
Soya bean meal	...	...	5/7d.

Accordingly decorticated earthnut cake is the cheapest source of protein.

- (2) A protein food is required as a milk substitute to balance the ration for fattening pigs. The foods suitable for this purpose are soya bean meal, meat meal and meat and bone meal. Referring again to the table, it is seen that at the current average prices of these foods the cost of the unit of protein equivalent in each is as follows :—

Soya bean meal	...	...	5/7d.
Meat meal (60% protein)	...	...	5/6d.
Meat and bone meal (40% protein)	...	...	5/8d.

Therefore meat meal (60% protein) is the cheapest milk substitute for pigs at the present prices of purchased foods suitable for pigs. This example shows also how the price per ton may mislead a purchaser into thinking he is being economical when he buys at the cheapest price. The 60% meat meal costs 4/11d. per cwt. more than the 40% meat and bone meal, and yet it is a cheaper source of protein than the latter. Besides, a lesser proportion in the meal mixture will suffice, and having usually a lower content of oil than the 40% grade, it is likely to prove more satisfactory than that grade both from the thriving point of view and its effect on the quality of the bacon.

- (3) Whether is it more economical to feed white pollard than brown pollard or white bran than red bran, even though the prices per ton of the white grades are higher than those of the brown or red grades? The figures in the table show that the cost of both the unit of protein equivalent and of starch equivalent is less for the brown pollard than the white, and less for the red than the white bran. It follows, therefore, that at current prices the coloured grades of pollard and bran are cheaper than the white grades. It should be remembered in this connection, however, that the comparison of costs in these cases has been made on the assumption that the composition of the coloured grades is the same as that of the white grades. A pollard containing say, 8 per cent. fibre, even if of a white colour, would have a far lower feeding value than one containing only 4 per cent. of fibre. Colour is not a guide as to the feeding value of pollard or bran.

TRADE AND PRICES OF LIVE STOCK AT BELFAST AUCTION MARTS.

Supplies of beef cattle at Belfast Auction Marts during September continued to show an increase, and were larger than in August. Prices, however, continued to decline, and the average for the whole month was 1/6d. cheaper at 33/6d. per live cwt. Trade was dull up to the third week of the month, when demand became brisk for the smaller offerings. A sharp increase in price resulted. This improvement continued into the last week, when a further considerable rise in price was recorded.

The following table shows the average prices of fat cattle during the past five weeks compared with the corresponding dates in 1937:—

<i>Week ended</i>	<i>per cwt.</i>	<i>Week ended</i>	<i>per cwt.</i>
10th September, 1938 ..	34/-	11th September, 1937 ..	40/-
17th " " " ..	32/3	18th " " " ..	38/-
24th " " " ..	33/-	25th " " " ..	37/3
1st October, 1938 ..	34/6	2nd October, 1937 ..	36/9
Average for month ..	33/6	Average for month ..	38/-
8th October, 1938 ..	32/6	9th October, 1937 ..	37/-

Store cattle supplies at the marts during the month were further increased. Quality remained fairly good, but demand varied from week to week. Average prices for the month showed a further decline from the levels of August. Dairy Cattle continued in normal supply. Demand moved fairly briskly all month, and prices showed a further considerable improvement. Supplies of sheep continued heavy. Fat lambs of good quality and finish sold readily at fully late rates, but mutton was harder to sell for less money.

Special sales of breeding sheep were held during the month. A fairly good volume of business was transacted by cross-channel buyers, and good quality animals met a firm demand. Inferior types, however, were hard to sell. Prices were generally below the levels of the corresponding sales last year.

PRICES OF OTHER STOCK AT THE BELFAST AUCTION MARTS.

Description.	Range of	Week ended 3-9-38	Week ended 10-9-38	Week ended 17-9-38	Week ended 24-9-38	Week ended 1-10-38
Fat Cows ..	Range of 1st quality 2nd "	£12 to £16 £8 to £13-10	£13 to £18-10 £10 to £13-10	£12-10 to £17-10 £8 to £13	£13 to £16-10 £8 to £13	£13 to £17-10 £8 to £13
Store Cattle : Forward Stores ..	Range of 1st quality 2nd "	£12 to £13-12-6 £8-7-6 to £11-10	£12-10 to £14 £11-5 to £12-5	£12-10 to £14 £8-5 to £12-17-6	£12-10 to £13-12-6 £10-12-6 to £12-7-6	£13-5 to £15 £11-15 to £13
Calves (under 12 months)	1st 2nd "	£7 to £9-10 £5-2-6 to £6-15	£9-10 to £10-15 £7-5 to £8-15	£8 to £9-15 £6-5 to £7-15	£8-5 to £10-10 £6-7-6 to £8	£9-17-6 to £11-15 £6-5 to £8-15
Dairy Cattle : Milch Cows ..	Range of 1st quality 2nd "	£22 to £27 £16 to £21	£22 to £28-15 £17 to £21	£22 to £27 £17 to £21	£22 to £27 £17 to £21	£22 to £30 £17 to £21
Springers ..	1st 2nd "	£21 to £26 £16 to £20	£21 to £26 £17 to £20	£20 to £23-15 £16 to £19	£18 to £21-10 £16 to £19	£21 to £27-10 £16 to £20
Sheep and Lambs : Crossbred & White Ewes	Range of 1st quality 2nd "	28/6 to 39/6 24/- to 31/-	28/- to 36/6 23/- to 29/-	25/- to 33/6 21/6 to 27/-	25/- to 36/- 19/- to 29/-	25/- to 41/6 21/- to 34/-
Blackface Ewes ..	1st 2nd "	22/- to 32/- 18/- to 26/-	21/- to 29/- 16/- to 23/-	20/- to 27/- 14/- to 21/-	21/- to 28/- 15/- to 21/-	20/- to 28/6 12/- to 21/6
Crossbred & White Lambs	1st 2nd "	27/- to 35/- 18/- to 27/6	28/- to 35/- 23/- to 28/6	28/- to 38/- 18/- to 28/-	28/- to 39/- 20/- to 29/-	28/- to 36/6 20/- to 28/6
Blackface Lambs ..	2nd "	—	13/6 to 18/6	13/- to 17/-	12/- to 18/6	12/- to 15/-
Crossbred & White Hoggets	1st 2nd "	28/- to 33/- 22/- to 27/-	28/- to 36/6 23/- to 27/-	25/- to 28/- 20/- to 24/-	25/- to 30/- 21/- to 24/-	— —
Blackface Hoggets ..	1st 2nd "	18/- to 20/- 15/6 to 17/6	—	15/- to 18/- 12/- to 14/-	19/- to 22/- 15/- to 18/-	— —
Rams ..	1st 2nd "	35/- to 41/- 28/- to 35/-	31/- to 48/- 25/- to 30/-	28/- to 35/- 25/- to 27/6	30/- to 45/- 25/- to 37/-	30/- to 55/- 24/- to 33/-

SHIPMENTS OF LIVE STOCK.

Statement showing the Shipments of Live Stock from Northern Ireland ports during the following periods:—Months of September, 1938, August, 1938, September, 1937; nine months ended 30th September, 1938, and 30th September, 1937.

PORTS OF :—	CATTLE.					SHEEP.			PIGS.					
	Fat	Stores	Milch Cows	Springers	Calves	Total	Fat	Stores	Lambs	Total	Fat	Stores	Total	Horses
Belfast ..	4,067	8,145	1,898	136	20	14,266	14,087	4	—	14,091	5,076	—	5,076	91
Larne ..	27	501	—	67	—	595	4,131	1	2,814	6,946	2,044	179	2,223	11
Londonderry ..	171	5,379	49	71	76	5,746	5,743	113	—	5,856	778	—	778	3
Newry ..	53	132	35	3	—	223	—	—	1,330	1,330	—	—	—	—
Total, September, 1938	4,318	14,157	1,982	277	96	20,830	23,961	118	4,144	28,223	7,898	179	8,077	105
Total, August, 1938 ..	4,240	11,670	1,991	292	84	18,277	41	—	33,150	33,191	6,756	366	7,122	151
Total, September, 1937	3,135	12,865	2,269	180	20	18,469	15,414	228	—	15,642	7,227	271	7,498	189
Total Nine months ended 30th September, 1938.	41,533	115,814	12,459	1,740	2,889	174,435	38,447	118	78,514	117,079	64,881	1,733	66,614	2,178
Total Nine months ended 30th September, 1937.	44,175	147,011	13,294	1,844	3,537	209,861	33,550	336	78,398	112,284	101,235	2,453	103,688	2,711

IMPORTS AND EXPORTS.

Table showing the Imports and Exports through Northern Ireland ports of certain Agricultural Products during the month ended 31st August, 1938, and the eight months ended 31st August, 1938, with comparative figures for the corresponding periods in 1937. This information also includes trade with Eire across the land boundary.

(These figures are supplied through the courtesy of the Ministry of Commerce and are subject to revision).

COMMODITY.	IMPORTS.			EXPORTS.		
	Month ended 31st August.		Eight months ended 31st August.	Month ended 31st August.		Eight months ended 31st August.
	1938	1937		1938	1937	
Bacon cwt.	4,084	3,789	30,938	31,587	32,561	249,075
Hams "	1,539	1,929	11,270	11,860	9,430	91,964
Pork "	6	215	705	1,862	2,222	19,879
Butter "	12,891	17,530	134,643	410	429	2,725
Eggs gt. hds.	63,976	54,635	802,959	262,234	299,546	2,652,500
Oat Products (inc. Oatmeal) cwt.	2,818	2,379	14,885	1,538	3,368	32,477
Potatoes tons	2	1	2,584	*459	*1,125	*127,917
Poultry cwt.	142	96	1,530	8,835	11,833	117,556
Grass Seeds "	413	42	14,472	4,082	2,579	248,857
						235,438

* These figures represent the quantities of potatoes inspected by the Ministry of Agriculture for shipment.

There were 12,857 cwt. of oats imported direct from abroad during August, 1938. There were no imports during the corresponding month last year.

ACCOUNT OF TRADE AT FAIRS.

Supplies of store cattle at fair centres last month were only of small to medium dimensions. The quiet demand that prevailed throughout the month of August continued during September, and sales were hard to effect, large numbers of cattle being left on hands. Towards the close of the month, however, trade showed some improvement, and prices in many cases appreciated. Strong, well-finished stores were fairly easy to dispose of all month, but especially at the close, when quotations were at times 10/- higher than in the previous month. The quality of the stock generally was good, and condition was well up to average. Strong polly bullocks in forward condition, and nice heifers for breeding, were generally fairly easy to dispose of. Poor types of cattle, however, were difficult to cash. Fat cattle were in fair supply throughout the country; the animals were well finished and up to a good standard of quality, the majority of the stock being of a good commercial type. Demand was less satisfactory than in August, and prices showed a tendency to ease further. Nicely finished medium weights of from eight to nine cwt. attracted most attention. Dairy cattle were again shown in small to medium numbers. The majority of the animals were disposed of without any trouble. From the middle of the month particularly, trade ruled fairly brisk, and prices showed an upward tendency. Rough types of cows were again neglected.

Sheep and lambs continued to be offered in larger numbers than a year ago, following the very good lambing season. Trade, however, was featureless, with the demand remaining dull. Prices continued on the levels of a month ago. Strong cross-bred fat lambs for immediate slaughter were the best sellers.

A steady demand ruled for young pigs, and clearances were effected at most centres at prices that showed a distinct improvement on the month. Store pigs also sold well at prices a little firmer on the month. Small numbers of brood sows were again generally of fair quality. Trade was fair, Yorks and York crosses being in most demand at prices around the levels of a month ago. The general price range was from £6 to £11 per head.

Table showing the numbers of Live Stock (1) exposed for sale, and (2) sold at 22 fairs in Northern Ireland during the months of September, 1937, and August and September, 1938:—

Description of Live Stock.	September, 1937		August, 1938.		September, 1938.	
	Number exposed for sale.	Number sold.	Number exposed for sale.	Number sold.	Number exposed for sale.	Number sold.
Store Cattle ..	7,476	5,111	6,997	3,699	7,387	4,233
Fat Cattle ..	1,176	930	1,274	1,083	1,595	1,408
Dairy Cattle ..	1,490	1,193	1,473	952	1,452	1,179
Sheep ..	3,355	2,517	503	245	3,755	2,415
Lambs ..	4,833	3,827	5,301	3,582	5,293	3,507
Young Pigs ..	3,318	2,732	3,139	2,647	3,631	3,013

10th October, 1938.

This report is issued free on application to the Secretary,
Ministry of Agriculture, Stormont, Belfast.

MINISTRY OF AGRICULTURE.

List of Leaflets and other Publications.

LEAFLETS.

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|---|---|
| No. 1. Flax Seed | No. 46. Hints on Winter Egg Production. |
| " 2. Improvement of Farm Poultry. | " 47. The Care and Management of Sheep. |
| " 3. Feeding for Egg Production. | " 49. American Gooseberry Mildew. |
| " 5. The Dishorning of Calves. | " 50. Potato Blight. |
| " 6. The Packing of Apples in Standard Boxes. | " 51. Butter-making on the Farm. |
| " 7. Potato Trials. | " 52. Gapes in Chickens. |
| " 9. The Renovation of Orchards. | " 54. The Breeding and Rearing of Calves. |
| " 10. Fruit Tree Pests—Cassid Bugs. | " 55. Destruction of Ragwort or Benweed. |
| " 11. Fruit Tree Pests—Aphides and Apple Sucker. | " 56. Identification of Egg Supplies. |
| " 12. Fruit Tree Pests—Caterpillars. | " 57. How to have Eggs of First Quality. |
| " 13. Contagious Abortion in Cattle. | " 58. How the Fertilisers and Feeding Stuffs Act benefits the Farmer. |
| " 14. Cheese-making on the Farm. | " 59. Bacillary White Diarrhoea (Pullorum Disease). |
| " 15. Suitable Varieties of Fruit. | " 60. Advantages of Winter Agricultural Classes. |
| " 16. The Feeding of Dairy Cows. | " 61. The Care and Management of Breeding Bulls. |
| " 17. Home Bottling of Fruits and Vegetables. | " 62. The Production of Timber on the Farm. |
| " 18. Marketing of Dead Poultry. | " 63. Sheep—Castration, Docking, Foot-Rot and Care of Feet. |
| " 19. How to Feed Linseed. | " 64. The Destruction of Warble Fly Maggots in Cattle. |
| " 20. The Hatching and Rearing of Chickens. | " 65. The Packing of Apples in Barrels. |
| " 21. The Uses and Advantages of Portable Poultry Houses. | " 66. Seed Testing Facilities for Traders. |
| " 22. Leather-jacket Grubs. | " 67. The Cultivation of Vegetables. |
| " 23. The Handling and Care of Wool. | " 68. The Cultivation of Strawberries. |
| " 24. Fluke in Sheep. | " 69. The Construction of Piggeries. |
| " 25. The Rearing and Management of Young Horses. | " 70. Ringworm. |
| " 26. Ordnance Survey Maps for Farmers. | " 71. The Cultivation of Raspberries. |
| " 27. How to Keep Eggs Clean. | " 72. Tree Planting for Shelter and Ornament. |
| " 28. The Construction of a Laying House for Poultry. | " 73. The Propagation and Maintenance of Healthy Stocks of Potatoes. |
| " 29. The Selection and Breeding of Laying Hens. | " 74. New Pure Strains of Flax. |
| " 31. Coccidiosis in Poultry. | " 75. Pig Production and the Pigs Marketing Scheme. |
| " 32. Roup of Poultry (Fowl Pox). | " 76. Acarine (Isle of Wight) Disease of Bees. |
| " 33. Spraying Calendar for Apple Orchards. | " 77. Licensing of Milk Producers and Distributors. |
| " 34. The Pruning of Apple Trees. | " 78. Graded Milk. |
| " 35. The Fattening of Pigs. | " 79. The Picking and Storing of Apples. |
| " 36. Advantages of Milk Recording. | " 80. Hoose or Husk in Farm Stock. |
| " 37. The Raising and Fattening of Turkeys. | " 81. The Construction of Cow Houses. |
| " 38. The Destruction of Charlock. | " 82. White Scour in Calves. |
| " 39. The Production of Clean Milk. | " 83. The Care, Management and Feeding of the Poultry Breeding Stock. |
| " 40. The Laying Down and Management of Temporary Pastures. | " 84. Lime and Liming. |
| " 41. Blackleg, Blackquarter or Quarterill. | " 85. The Growing of Trees. |
| " 42. The Purchase of Balanced Rations for Dairy Cows | |
| " 43. Tuberculosis in Poultry. | |
| " 44. Results of Crop Experiments. | |
| " 45. The Breeding and Rearing of Pigs. | |

CIRCULARS.

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| No. 5. Why Pay a Tax on the Horns of Cattle? |
| " 8. Basic Slag. |
| " 9. Smut in Oats. |
| " 10. Purchase of Fertilisers and Feeding Stuffs. |
| " 11. Fertilisers and Feeding Stuffs Act—General Summary. |
| " 12. The Treatment of Liver Fluke. |
| " 13. The ox-Warble Fly. |
| " 306. Fertilisers and Feeding Stuffs Act, 1926—Revision of Regulations. |

MISCELLANEOUS PUBLICATIONS.

Store Cattle.
 Reports on Egg-Laying Tests.
 Crop Insurance.
 List of Growers of Certified Crops of Immune Varieties of Potatoes.
 List of Growers of Certified Crops of Non-Immune Varieties of Potatoes.
 The Ministry's Monthly Report.
 Register of Premium Stallions.
 Guide to the Live Stock Breeding Act (Northern Ireland), 1922.
 Guide to the Marketing of Fruit Act (Northern Ireland), 1932.

Any of the above publications may be obtained free of charge and post free on application to the Secretary, Ministry of Agriculture, Stormont, Belfast.

The following publications can be obtained from His Majesty's Stationery Office, 80 Chichester Street, Belfast, at the prices stated:—

- (1) The Annual Report of the Ministry of Agriculture for Northern Ireland. Price 2/6 net.
- (2) Annual Report upon the Agricultural Statistics of Northern Ireland. Price 2/- net.
- (3) The Journal of the Ministry of Agriculture for Northern Ireland. Price 2/6 net.
- (4) The Agricultural Output of Northern Ireland, 1925. Price 2/6 net.